Shane A. Sanderson

January 22, 2013

Re: Gateway Pacific Terminal / Custer Spur EIS

This letter is to **support inclusion of Skagit County in the scope** of the Gateway Pacific Terminal / Custer Spur EIS. My specific concern is the impact of a significant increase in rail traffic through Skagit County on Emergency Medical Service response throughout our county, particularly in our central core.

I emphasize these comments are entirely my own. Any references to groups that I am involved with now or have been in the past are simply to point to the sources of my information (and for your future contacts), not to imply their endorsement.

An abbreviated resume, to gain some street creds:

- I have lived in Skagit County for 38 years. (There are now three generations of us here. Soon to be four, I think.)
- 1974: MHA, Healthcare Administration, U of Iowa. Various hospital admin. jobs in WA until 1979.
- 1980-2003: WA Dept. of Health, Office of Emergency Medical Services. Planning, evaluating, advising funding and other support to EMS and Trauma system development in communities throughout the state.
- 2004-2011: Member (Consumer, District 1) Skagit EMS Commission – a County-appointed public Commission responsible for planning, design, management, quality control, and financial support of the County-wide EMS response system
- 2012 to present: Member (Consumer), Central (Skagit) Valley Ambulance Authority – a county-appointed board that directly manages CVA, the public "ambulance company" that serves most of the county's population and provides most of its EMS activity.

There seems to be general agreement that in Skagit County, the GPT/BNSF proposal would dramatically increase rail traffic next to the N/S I-5 corridor, where most of the residential and commercial areas are concentrated. There are many well documented "at-grade" intersections. It is also understood that the Skagit River has a huge impact on traffic flow. From Mount Vernon to the West, there is only one bridge (Memorial Highway). To the North, there are two bridges (Riverside Dr / Burlington Blvd and I-5), which are right next to each other. The next upriver crossing is at Highway 9 entering Sedro-Woolley; downriver, near Conway. *To cross both the river and the railway in a hurry takes some serious logistical thinking.*

Some **basic Skagit County EMS System stats**, gleaned from reports to the EMS Commission and other sources:

- County-wide, during the 12 months ending 9/30/12, there were 11,930 dispatches for EMS through the 911 center. That is an average of 33 dispatches per day
  - A large majority of these dispatches start out as "emergency", that is time-critical response (aka "lights and sirens"). They may be downgraded after evaluation by the first competent medical personnel arrive on-scene.

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    - The majority of dispatches involve response from at least two agencies: the local city or district fire agency (basic life support); plus the "ambulance" provider, (advanced life support – ie, two Paramedics -- and patient-transport capability).
    - Fire and ambulance responses often start at different geographic locations, following different paths to arrive at "the scene". Thus, there are generally two or more opportunities for delayed responses to the scene of critically ill or injured patients.
  - Of those dispatches, 7,730 (21 per day) require transport of a patient from the scene to a hospital. In essence, this is a "second call", which may or may not be time-critical. [Note: I don't happen to have statistics on numbers of "lights-and-sirens" runs from scene to hospital, but that information should be easy to retrieve by people with the source data.]
  - Of these transports, 4,553 were taken to Skagit Valley Hospital (12+ per day). (Note: SVH is just east of the Kincaid Street crossing, but also directly affected by the College Way and Blackburn crossings.)
    - *Timely access to these services is vital to the quality of life – indeed, the preservation of lives – in Skagit County.* SVH is a Designated Level III Trauma Service and also offers Advanced Emergency Cardiac and Stroke services. These services are not available elsewhere in our community. [Note: For Trauma, Harborview/UW/Children's Hospitals in Seattle are Designated Level I. There are no Designated Level II Trauma Facilities in Northwest Washington.]
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- **Central Valley Ambulance stats:** CVA serves the area from the Snohomish to the Whatcom County borders, and from the Swinomish Slough to somewhat east of Sedro-Woolley. This includes the majority of the residential, commercial, retail and industrial development in the Skagit County. This includes all of the area impacted by the GPT Proposal. [Note: This also includes most of the GMA impact areas in Skagit County; future population growth and commercial development is being channeled into this portion of the county.] CVA statistics that parallel the county-wide statistics above are:
  - 8,750 dispatches (24 daily); resulting in 5,694 transports (15+ daily); destination was SVH for 4,283 transports (12 daily).
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- General **Emergency Medical Services "facts"** or at least conventional wisdom. EMS is a time-critical service, and we frequently don't know when a few extra minutes will make a life-or-death (or recovery-or-disability) difference until after the fact. We start each call as though each second matters, until we *know* that we can relax a bit without compromising the patient's outcome. Hard data is not easily available, especially outside major urban areas with University Hospital resources nearby.
  - The following is lengthy, but bear with me. My point is, there are times when minutes, even sometimes seconds matter, details like "intersection delay times" can have a huge impact on people's lives, right now and right here.
  - First, I will include a quote from 1/20/13 Skagit Valley Herald, from a spokesman who says BNSF does "everything we can to avoid blocking public crossings for more than 10 minutes." Ten minutes is an eyeblink if you are moving coal from Montana to Bellingham. Ten minutes can be an eternity if you have "CPR in progress" in the back of an ambulance. It can mean a literal lifetime for the patient.
  - **Trauma:** The life-or-death standard is "The Golden Hour" (also often called "Time to Surgeon") This is an hour from injury to first incision, and it's success is well documented. The EMS agencies do not have this full hour. Deduct the time for all the things that happen after the injury but before the EMS responders are notified. Then deduct the time from rolling through the hospital doors to time-of-surgery. This is the time the EMS agency can manage, and this is the time the trains roll through. [Note: In Skagit County, SVH has committed significant resources to

minimize "through the hospital doors to time of surgery. It is our destination of choice for Trauma, short of the "worst of the worst" that need immediate transport to Seattle, by ambulance or by helicopter.]

- **Cardiac:** I don't think they use the term Golden, but the life-or-death standard here is also an hour, this time to heart catheterization. The *caveats* from above all apply. Again, SVH has committed resources to insure that the resources are available to make this service available "on demand" 24/7.
  - Cardiac aphorism: Time is heart muscle (literally measured in fractions of minutes).
- **Stroke:** Research is newer in this area, but similar to above with a huge exception: A diagnostic procedure (CT Scan) sorts patients into two categories. For one group, "clot busting" drugs will likely save their lives. For the other group, the same drugs may end their lives. SVH has in place the process to get a patient quickly through a CT scan and then into the appropriate therapy. Again, SVH is our destination of choice in this community. *Protect our access to SVH.*
  - Neurology aphorism: Time is braincells (see Cardiac, above).

- **A reality about EMS People**
  - In a very real sense, whatever happens with GPT is not a "personal" problem for EMS responders or our EMS system. ("Hey, it ain't *my* fault.") Whatever changes the broader community decides it wants, or can tolerate, or cannot prevent, EMS will continue to give the best care we can "under the circumstances." If there is snow, look for a snowmobile. If there is a flood, look for a boat. If there is a train in the way, continue CPR until the barriers go up. We'll see how it works out when we get to the hospital.
  - But, EMS people would rather plan with the community to avoid barriers that can be avoided, and to deal with the ones we all missed in the beginning.
  - Which leads us to ….

- **Mitigation:**
  - **Overpass/Underpass**: The same strategies that work for every other mode of transportation work for ambulances, even during extreme emergency conditions. By ourselves, EMS cannot justify the expense. But we should be able to tip the scales in favor of separating (horizontally or vertically) vehicle and rail traffic, at least at certain "pinch points" that are critical to our mission.
    - The transportation industry has volumes of statistics about the cost for many categories of "waiters" in traffic. What is the dollar value of an ambulance ("CPR in progress") waiting for a train to pass? This can be calculated and added to the mix. It does get touchy, though: What is the value of a human life?
  - **Information:** However the traffic patterns are now or develop in the future, EMS people will do their best to adapt. Better information leads to better adaptation.
    - "Predictable disruptions" are manageable: If schedules could be shared in advance (Month? Day? Hour?), the best routes from where-I-am-now to where-I-need-to-be-NOW can be calculated.
    - Our EMS and Fire responders have real-time data capabilities through the 911 Dispatch Center. (I must admit, the details of this are a mystery to me.) Information on rail traffic automatically fed to the Dispatch Center would let EMS responders know in their vehicles where trains are, which direction they are going, how fast. They could adjust their routes accordingly, by computer or by intuition.

- **For MORE Mitigation and Cooperation Ideas:**
  - Skagit County, through their EMS Commission, has requested a comprehensive EMS system evaluation and draft management plan, in process by Emergency Services Consulting

International (ESCI). Though some initial drafts have been received, their report is not yet complete. The final report is expected in late February to mid March.

- ESCI has a long history and good reputation nationally as an EMS systems consultant.
- In the process of developing their report, ESCI has reviewed a great deal of recent and detailed data on Skagit EMS activities, which may be useful to the GPT EIS review. They are well positioned to add their expertise to include the EMS impact of the GPT proposal.
- I am not in a position to ask for (or certainly, pay for) ESCI's involvement, but I recommend this as a readily-available resource for all parties to include in their research.

As you can certainly tell, I am an EMS junkie of long standing, with a particular interest in the future of EMS services in Skagit County. Beyond that, I am cautiously neutral about the GPT proposal, but mostly I figure that's for others to decide.

If I can make any further contributions, please don't hesitate to ask.

(I would give you an electronic signature here, but I haven't figured out how.)

Shane A. Sanderson